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FINAL PHASE I EVALUATION
OF
DEVELOPMENT OF COMPETITIVE MARKETS
AGRICULTURAL STATISTICS IMPROVEMENT
ACTIVITY
(Project No 663-0005)

Prepared for U S. Agency for International Development/Ethiopia

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3 1 1 Strengths of the Current Agricultural Information Collection and Dissemination System

At the 1997 NAIS Workshop, many good papers were presented as to the strengths and weaknesses of the current system of agricultural information collection and dissemination. The objective of the workshop was to develop a conceptual and methodological framework as well as appropriate policies and plans of action for NAIS. Regional states, federal ministries and agencies/authorities presented institutional position papers. Most of the problems documented in these reference materials still exist today. Finding long-term solutions to well documented problems is the challenge for all users and providers of agricultural information and statistics. Presented below are strengths and weaknesses of the current system as referenced through available documents and discussions with those organizations. Our interviews and observations have confirmed that conditions are still basically the same.

There are several strengths within in the current system when compared to other developing countries.

1 Existing Infrastructure to Conduct Agricultural Surveys

CSA has the resources and experience to conduct agricultural surveys using statistical methods. They have 22 SBOs located throughout the country and an Agricultural Statistics Department at their national headquarters. This resource can be drawn upon when designing surveys and training personnel.

2 Widely Dispersed Staff of Development Agent through Regional Agricultural Bureaus

There are sufficient staff within the Regional Agricultural Bureaus to collect and disseminate agricultural information at any administrative level required. Collecting information is a regular part of the work of Development Agents.

3 1 2 Weaknesses of the Current Agricultural Information Collection and Dissemination System

There are many more weaknesses than strengths within the current system. Among the key areas of concern are the following:

1 Unfilled User Needs and Gaps in Statistical Series

All the users surveyed expressed interest in obtaining timely and accurate agricultural statistics at least down to woredas. In addition, users would like more information on a wider range of agricultural commodities.

“The recent Agricultural Sample Surveys of CSA have not included State and Private Commercial Farms. It also lacked area and production of temporary crops of peasant

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ACRONYMS

Executive Summary

The purpose of this second Phase I evaluation of USDA assistance to the Central Statistics Authority (CSA) is to (1) review the present system for collecting and disseminating agricultural information and statistics in Ethiopia and (2) recommend a plan of action for future USAID assistance to improve the accuracy and timely availability of agricultural information at the national, regional and local level¹

Clearly specified in the Participating Agency Service Agreement (PASA) is the objective of the Agricultural Statistics Improvement Activity (ASIA)

To improve the capability and capacity of the CSA and other appropriate Ethiopian institutions (Ministry of Agriculture) involved in agriculture data collection and information processing so they can provide more timely, accurate and reliable agriculture information to a broad range of Ethiopian public and private users²

The evaluation team employed the following techniques which describes the present structure and function of the system for collecting and disseminating agricultural information and statistics in Ethiopia, summarizes the impact of USAID assistance to CSA to improve the system under ASIA, presents the options available for improving the overall system, and recommends a plan of action for future support

Review of documents and reports,
Consultations with key respondents,
Presentation of SOW requirements to CSA and analysis of their responses, and
Close out meetings with CSA and USAID and incorporation of their comments

During the entire evaluation, maximum cooperation was received from USAID, USDA, the RA and other interviewees for which the evaluators are appreciative

Table 1 briefly summarizes the type of information being collected as well as the specific roles, responsibilities and linkages between organizations. Primary crop production statistics are collected by CSA and Regional Agricultural Bureaus (RAB). At the national level, MoA aggregates RAB numbers. CSA is the official provider of primary agricultural statistics, collected by utilizing standard accepted probability sampling survey methods which can provide the user with a measurable degree of confidence. RABs primary information is collected subjectively as part of their routine activities. Their information is at a much lower level of aggregation than CSAs. Market price information is collected by specialized agencies within their respective area of interest on a regular basis while RABs collect more general information.

Linkages within and between GFDRE organizations and others institutions outside government are very important. Since communication is the building block of linkages and communications are found to be poor or non-existent, it is logical to conclude that linkages between these organizations are also poor. **Clearly, a change in organizational attitudes is necessary before**

¹ Phase I Evaluation SOW, II, p. 1

² PASA Scope of Work, II, p. 2

much cooperation and collaboration will take place. There is little that external technical assistance can do to create or ensure effective cooperation/collaboration between institutions. This requires internal initiative.

The major point to be addressed is that **user needs are not being met by the main governmental providers of agricultural statistics and information.** This issue can be resolved since there are several strengths within the current system when compared to other developing countries that present significant opportunities

- Existing infrastructure to conduct agricultural surveys, and
- Widely dispersed staff of development agent through regional agricultural bureaus

There are many more weaknesses than strengths within the current system. Among the key areas of concern are the following

- Unfilled user needs and gaps in statistical series,
- Limited coordination and collaboration,
- Inadequate flow of information,
- Non-standardized methodologies,
- Lack of comparability, and
- Reliance on untrained and unskilled data collection personnel, and
- There is No Single GFDRE Agency Responsible for Making the Official Crop Production Estimates

There has been some improvement in the way CSA collects and analyzes statistics through the continued efforts of the Resident Advisor (RA) to address issues raised by CSA management but the improvement has not been as great as expected. The major area of contention is the frame and sample design for National Agriculture Census (NAC) which also impacts on the AgSS. There has been a management bias at CSA to maintain the status quo on one side with the RA on the other recommending newer statistical theory. Given the importance of carrying out the first National Agriculture Census it is crucial that both parties agree on the methodology and design before it is undertaken.

There are two parts to actions recommended in the short term. The first part deals with those activities that can be supported under the current ASIA initiative. The second deals with actions that can be carried out within the next year, which would either require another “no cost” extension to ASIA phase I or a new Agricultural Information System initiative.

1 Completion of ASIA Phase I Tasks Initiated or Approved

- Funding and participating in the drafting of the NAIS charter
- NASE (NAC) certification
- Complete computer and equipment installation for the 4 SBOs and carry-out a test of branch capabilities
- Full funding for the two CSA staff members pursuing Masters degrees
- Support masters’ students with their thesis preparation
- Reviving the ASIA Oversight (Steering) Committee

- 2 GFDRE Short Term Priorities Within an Enhanced ASIA Under the New USAID SO as a Revised ASIA
 - Testing of a certified design for a National Agriculture Census (NAC – previously referred to as the NASE)
 - Upgrading of AAU/SD
 - Conducting short-term in-country training for professional statistical staff
 - Training of MoA Development Agents
 - Assisting DPPC to improve information collection systems outside of agriculture
- 3 Medium Term (years 2 - 5)
 - Federal Initiatives
 - Conducting the NAC (also referred to as NASE)
 - Upgrading AAU/SD
 - Master's level training in the US for capacity building for information systems
 - Cooperative Donor Support for NAIS
 - TA
 - Regional Initiatives
 - Support to Amhara RAB (also referred to as BoA)
 - Support to Amhara DDPC

Based on the findings, USAID has three options

- 1 Discontinue support at end of Phase 1 (December, 1999), with funds committed to complete the masters training of 2 CSA staff,
- 2 No cost extension of Phase I through September 2000 (DCM PACD) with emphasis being placed on NAC certification, or
- 3 Developing and Funding a new Collaborative Agricultural Information System (CAIS) initiative under a greatly expanded mandate which potentially covers all providers and users of agricultural statistics and information at both the federal and regional level Program oversight and coordination would be done by USAID with technical assistance provided through USDA PASA, IQC providers, direct contracts and a local FSN USAID to determine the source of assistance based on the unique requirements of the task

It is the view of the ASIA/ET that the third option is best There is great potential in Ethiopia for a first class agricultural information and collection system It is important that USAID places itself in a position to assist whenever the conditions are conducive

1 Purpose

The purpose of this second Phase I evaluation of USDA assistance to the Central Statistics Authority (CSA) is to (1) review the present system for collecting and disseminating agricultural information and statistics in Ethiopia and (2) recommend a plan of action for future USAID assistance to improve the accuracy and timely availability of agricultural information at the national, regional and local level ¹

The request to carry out the Agricultural Statistics Improvement Activity (ASIA) came from the Central Statistics Authority (CSA) as a result of CSA having received in 1994 and 1995 periodic short term assistance for the population census via USAID/Ethiopia's Development of Competitive Markets (DCM) (Project No 663-0005) which addressed some of the discrete problems faced by the Agricultural Statistics Department (ASD) of CSA. The reason for CSA making the request was in order to receive a more comprehensive assistance package to help it improve the quality and timing of their annual agricultural sample survey (AgSS). Based on CSA's request, a consultancy report was prepared by the United States Department of Agriculture, National Agricultural Statistics Service (USDA/NASS) in March of 1996, which later formed the basis for the Agricultural Statistics Improvement Activity (ASIA). The project became a reality in January of 1997 when the Ministry of Economic Development and Cooperation (MEDaC) and USAID finalized their written agreement. This was followed by a Participating Agency Service Agreement (PASA) being negotiated between USAID/Ethiopia and USDA in April of 1997. Shortly thereafter, July 10, 1997, the USDA Resident Advisor (RA) took up his two-year post within CSA/ASD.

Clearly specified in the PASA is the objective of the Agricultural Statistics Improvement Activity (ASIA)

To improve the capability and capacity of the CSA and other appropriate Ethiopian institutions (Ministry of Agriculture) involved in agriculture data collection and information processing so they can provide more timely, accurate and reliable agriculture information to a broad range of Ethiopian public and private users ²

A mid-term evaluation of ASIA Phase I was completed in December 1998, and a no cost extension to the project was undertaken based on the recommendations in that report. Before the new no cost extension expired USAID decided that a re-evaluation was needed before decision about a second phase could be made. Because USAID was revising its agricultural strategic objective and limited progress was made since the last evaluation, the original Phase I evaluation scope of work associated with this report was changed to reflect future opportunities. This evaluation is intended to provide a sound basis for joint GFDRE/USAID discussions leading to the design of future activities to support an agricultural information and statistics collection and dissemination system.

¹ Phase I Evaluation SOW, II, p. 1

² PASA, Scope of Work, II, p. 2

2 Methodology

USAID Ethiopia's Office of Agriculture Natural Resources contracted with Checchi and Company Consulting, Inc and Louis Berger International (Contractors) to perform this second Phase I evaluation of ASIA. For this evaluation of approximately one month duration, these firms fielded an Evaluation Team (ET) consisting of an Agricultural Statistician and a Mathematical Statistician. The consultants began the evaluation with a one-day briefing by USDA personnel in Washington, DC, before proceeding to conduct four weeks of fieldwork in Ethiopia. Before departing Ethiopia, the consultants briefed USAID and CSA and presented a final draft of the evaluation report. The report was reviewed for two weeks to allow for comments followed by a week for the contractor to finalize the report.

The evaluation team employed the following techniques in preparing this report which describes the present structure and function of the system for collecting and disseminating agricultural information and statistics in Ethiopia, summarizes the impact of USAID assistance to CSA to improve the system under ASIA, presents the options available for improving the overall system, and recommends a plan of action for future support.

Review of documents and reports (**Appendix 1 - Documents Reviewed**)

Consultations with key respondents (**Appendix 2 - List of Persons Interviewed**)

Presentation of SOW requirements to CSA and analysis of their responses (**Appendix 3 - ASIA Final Phase I Evaluation Meeting between CSA, USAID and Evaluators - 10/1/99**)

USDA and USAID provided the evaluators with many useful reports, which were reviewed before meeting with representatives from key providers and users of agricultural information. The papers prepared for the National Agricultural Information System (NAIS) Workshop, which was held between October 30 to November 1, 1997, were very useful in presenting the mandate of information providers and identifying user requirements. CSA provided an official response to only one of six questions (no. 5) asked from them at the Oct. 1 meeting between CSA, USAID and the Evaluators.

The ASIA Evaluation Team (ASIA/ET) conducted all interviews and discussions by starting with a description of the purpose of the evaluation. This was followed by eliciting responses in relation to agricultural information they provide and the problems associated with that task, their agricultural information requirements and their viewpoint as to how the current system can be improved.

During the entire evaluation, maximum cooperation was received from USAID, USDA, the RA and other interviewees for which the evaluators are appreciative.

3 Findings

The findings of this evaluation are based on a review of all materials, discussions and interviews with key respondents, and assessment of the tools and techniques utilized by information providers and users

Discussion of findings follows the ASIA/ET SOW specifications

- Assess the present system for the collection and dissemination of national, regional and zonal agricultural information and statistics,
- Describe the impact on the collection and dissemination of agricultural information and statistics from USAID assistance to CSA under the ASIA project,
- Look at the options for improving the data collection and timely dissemination system,
- Recommend short and medium term steps or actions to be taken to reach the long term objective, and
- Recommend how to obtain baseline and tracking data for the Amhara Region USAID/Ethiopia initiatives

3.1 Present Agricultural Information Collection and Dissemination System

This section of the report looks at the present system for the collection and dissemination of national, regional, zonal and woreda agricultural information and statistics (especially crop production estimates market price information, crop conditions, rainfall) in Ethiopia. Specific questions answered are

- a Which institutions are involved in the collection and dissemination of agricultural information and statistics? What are their specific roles, responsibilities and linkages with other GFDRE organizations?
- b Which institutions are the principal users of agricultural information and statistics and how do they use this information?
- c What are the strengths and weaknesses of the current system?³

There are many organizations involved in the collection and dissemination of national, regional and zonal agricultural information and statistics. The table on the pages 6 and 7 (Table 1) briefly summarizes the type of information being collected as well as the specific roles, responsibilities and linkages between organizations.

Primary crop production statistics are collected by CSA and Regional Agricultural Bureaus (RAB). At the national level, MoA aggregates RAB numbers. CSA is the official provider of primary agricultural statistics, collected by utilizing standard accepted probability sampling survey methods, which can provide the user with a measurable degree of confidence. RABs primary information is collected subjectively as part of their routine activities. Their information is at a much lower level than CSAs. Market price information is collected by specialized agencies within their respective area of interest on a regular basis while RABs collect more

3 Revised Statement of Work, p. 1

general information The Ethiopian Grain Trade Enterprise (EGTE) collects weekly price information for 17 cereals from 64 markets The Ethiopian Coffee and Tea Development Authority also regularly collect market price statistics for coffee and tea Information on use of improved seeds, fertilizers, herbicides and pesticides comes from two specialized agencies, National Fertilizer Industry Agency (NFIA) and National Seed Industry Agency (NSIA) Meteorological data is collected by the National Meteorological Services Agency (NMSA) and is made available to interested parties

The CSA crop production forecast and final crop production reports provide statistics (20 major crops) for the sedentary population (rural) utilizing a sampling frame based on the 1994 Population and Housing Census Excluded from the AgSS are enumeration areas (EAs) classified as urban as well as nomadic (livestock) areas Surveys are conducted utilizing enumerators and supervisors from 22 Statistical Branch Offices (SBO) located throughout the country SBOs are not part of the decentralized regional government administration but part of a centralized CSA Keeping CSA centralized eliminates the reporting, coordination and administrative problems that can arise from decentralization CSA during an agricultural year conducts four separate surveys, which make up the AgSS (Meher Season Forecast and Final Report, Belg and Livestock)

The main provider of detailed agricultural information and statistics are the Regional Agricultural Bureaus (RAB) that aggregate data emanating from the DA at the woreda level According to proclamation no 41/1993 article 34, the powers and duties common to all bureaus within its area of activity is to undertake studies and research, collect and compile statistical data, and transmit same to the concerned central executive organ The Federal Ministers were also mandated a similar function at a higher level (nagarit gazeta no 4 of 23rd August 1995 – part 3 - Ministries) when it was mandated that each Ministry in its field of activity undertake studies and research, collect and compile statistical data (10 l c) Currently there is no mechanism ensuring the continual flow of standardized information from regions and the lowest administrative units (farmer associations) utilizing the RAB structure in collaboration with MoA There are variations in data items and procedures between regions, which can be addressed once the charter for the National Agricultural Information System (NAIS) comes into law The administrative structure of the regional agricultural information collection system is from bottom to top, the Agricultural Development Center, followed by the Woreda Agricultural Office, the Zonal Agricultural Department, and finally the Regional Agricultural Bureau A RAB is responsible to and reports to the Regional State Council Development Agents (DAs) working at the woreda or lower level are responsibility for timely and accurate collection of the lowest level of information Given all the levels which the information must pass, it is important that every participant has a good understanding of what is being done, how it is being done, and what use and benefit will ultimately be derived by rural households Good two-way communication links at all levels are essential if timely and accurate information is to reach the central government

Linkages within and between GFDRE organizations and others institutions outside government are very important Linkages are forged when people within the organizations talk to each other about common interests and needs As a result of good communication, cooperation and collaboration there develops a strong relationship to meet common needs and to attain common goals These efforts usually result in the sharing of information and congenial relations between

organizations Results of our interviews and research show that communication between many organizations is poor or non-existent Some management personnel say that communication is good, but evidence within and between organization is that it is generally poor

Since communication is the building block of linkages and communications are found to be poor or non-existent, it is logical to conclude that linkages between these organizations are also poor If organizations are mandated by law or administrative decree to communicate and to form linkages, success is unlikely, if

- i information is viewed as power and thus to share information weakens one's position,
- ii there is limited confidence in the information, and one fears to share it because it may be proven to be wrong,
- iii the information to be collected or disseminated is politically unpalatable and therefore the desire for its dissemination is limited, and
- iv keeping one's power or influence is better served by co-operating only when there are no other alternatives

The concepts of a provider of statistics as one who collects and disseminates statistics or information and a user as one who uses the data or information are simple Identifying each institution as to whether it is a provider or user is very difficult The only institution that is strictly a provider is CSA MoA collects and disseminates much data as part of its many different responsibilities, and thus is a provider It is also a user through its evaluating, monitoring, prevention and regulation functions Many of the organizations in Table 1 and those discussed throughout the paper would like to be strictly users if their data requirements could be met from sources providing timely and accurate data at low level administrative unit Listed below are some institutions that are primarily users of agricultural information and statistics

- Ministry of Economic Development and Cooperation (MEDaC) for national accounts and food security/human welfare (chronic),
- Disaster Preparedness and Prevention Committee (DPPC) in relation to food security monitoring (transitory)
- Ministry of Agriculture (MoA) in their functions of evaluating and monitoring production, intervention impact (research and extension), diseases and pests, vaccinations, stock off-take and movement, hides and skins sales, and crop and livestock market information
- Donors (USAID, WB, UNDP, FAO, WFP, EU, CIDA, GTZ, etc) who utilize the information for effective targeting of food aid and the development, monitoring and evaluation of employment generating schemes (EGS) and activities that enhance the wellbeing of Ethiopians
- NGOs (CRDA, CARE, SCF/UK, WVI, etc) utilize the information for effective targeting of assistance and the monitoring and evaluation of their agricultural based programs
- Regional State Councils for development planning and for intervention targeting as a result of natural and man-made disasters

Table 1 Present Systems for Collection and Dissemination of National, Regional and Zonal Agricultural Information and Statistics

Organization	Data Collection	Disseminate Information	Specific Roles and Responsibilities	Linkages with other GFDRE Organizations
CSA	Meher Season – Final Area & Production, Major crops, Land Utilization Agricultural Practices Forecast Area & Production, Major crops Belg Season – Area & Production, Major Crops Livestock, Poultry & Beehives Data gathered through sample surveys by enumeration of rural sedentary areas	Annual Reports for each major survey Some items at regional and zonal level	Official Statistical Collector and Disseminator	Poor Communication Limited collaboration and coordination
RAB, MOA	Crop area & production by season (cereal, grains, permanent, vegetable spices) Livestock numbers and production, Prices received for crops and livestock, Many specific items gathered but not published Development Agents responsible to RAB, gather data at farmer level, aggregate to Woreda Zonal, Regional National Data from observation and enumeration	Annual Summaries for major commodities Some items at Worada level Monthly crop conditions for early warning use	RAB gathers data needed for their function as well as for MoA Gather data for other organizations as needed	Responsive to requests for information
EGTE	Grain prices, Volume inflow and outflow – gather on weekly basis throughout the year Production – Do personal observation assessments Use CSA & MoA data only for reference Feel their own information is more reliable and timely than CSA, MoA, FAO, and others	Disseminate prices to Government, EU, FEWS Public by radio broadcast Do not disseminate production information	Parastatal – To stabilize grain market Gather data out of necessity	Contact with government EU, FEWS, etc
DPPC	Rapid Assessment Surveys as necessary Reference to both MoA and CSA data Use data from MoA, NMSA, EMA, MoH, MoE to identify impending disaster for Early Warning Data mostly qualitative Primarily data user but gather data because they must have it and can't get it elsewhere	Define needs for food security assistance Annually, Monthly from early season forecasts to final estimates	Report to Prime Minister - Determine shortage problems and causes Issue Early Warnings and needs for food assistance	Works with all suppliers of information as well as donors and NGOs
FEWS, USAID	Use data from other institutions, satellite data and rapid assessment trips to assess needs for food assistance, with EU, DPPC WFP, FAO and NGOs Crop area, cropping pattern crop performance, Weather compared with normal season	Monthly FEWS/EU report has regional narratives	Provide crop and livestock performance information and food needs information	DPPC, EGTE NMSA EMA MoA

Table 1 - cont Present Systems for Collection and Dissemination of National, Regional and Zonal Agricultural Information and Statistics

Organization	Data Collection	Disseminate Information	Specific Roles and Responsibilities	Linkages with other GFDRE Organizations
WFP	Rapid Assessment of production & population for food assistance needs Qualitative variables – Crops, Livestock, condition & Production, Inputs, Holdings Use satellite imagery and mapping for tracking disasters	Information as needed in cooperation with other organizations	Provide assistance in role as non-government organization (NGO)	MoA MoH DPPC
GMI, EU	Major participant in rapid assessment to determine food assistance needs and development of interventions to poverty	Monthly FEWS/EU report	Organizer and focal point for EU food assistance	DPPC, FEWS
FAO	User of all available data Sends teams out to do their own crop assessment or in collaboration with others	Production estimates and food assistance needs	NGO providing technical assistance and humanitarian programs	MoA DPPC
AFRD, MoA	Livestock Numbers at Regional Woreda level – from farmer data ILRI, FAO Vet Data – disease, vaccination data Cattle Breeding Improvement Data – Milk production recording and herd registration	Livestock numbers published Breeding and Vet mostly internal use	Develop and Improve Livestock and Fishery production	ILRI FAO
WB	Social and Rural Development – Household Income and Expenditures, Welfare monitoring	Government Internal Reports	NGO providing funds for national development	
NAIS, MoA	To be Established - To assimilate and disseminate information for the Agricultural Sector	Broad based database with network linkages to data users	Charter and legal basis needs establishing	All data providers and users
LMA	Market Research and Development Plan to develop market reporting – price, demand volume local market situation Requirements of importing countries Regulate importing countries	Plan to develop market reporting	New (1998) Parastatal for Livestock and Products Marketing	

holdings such as vegetables (potato, tomato, carrot, etc), spices and others and production of all types of permanent/perennial crops such as coffee, fruit crops (orange, banana, papaya, etc) root crops (enset, cassava, etc) and others The partial non availability of these statistics has severe impact on planning and policy analysis of the agriculture sector ”⁴

“In general, most of the statistical data/information required for agricultural planning, policy formulation, analysis and projection of future sectoral situation are either unavailable or partially available in fragmented form ”⁵ This statement is supported in draft of “A Medium Term National Statistical Program for Ethiopia (1992 – 1996 E F Y)” prepared under MEDaC What should be noted is that all needs identified can not be met, at least in the near term Therefore it becomes an issue of maximizing the information output from available resources To do so will require cooperation and synchronization of work between institutions

At this point in time major user needs are not being met by the main governmental providers of agricultural statistics and information

2 Limited Coordination and Collaboration

“Lack of coordination in the generation of agricultural statistical information by the various suppliers creates at least two kinds of problems resource wastage and anarchy of statistical information (confusion of users) ”⁶

If there were coordination and collaboration then there would be greater consistency, accuracy and compatibility of data on crops and livestock It has been expressed that “CSA has not adequately exercised its mandate with regard to coordination of statistical work being carried out outside of the CSA Furthermore, there is also a need for the revision of the statistical law of the country so as to be able to reflect the current administration and economic set up of the country ”⁷

In the DPPC/EWD Agricultural Data Position Paper for the 1997 NAIS Workshop the opinion was expressed that “there appears to be a frequent unwillingness on the part of line ministries to share information with one another and with the DPPC ”⁸

4 Adem, Getachew and Yismaw, Demile Agricultural Information Situation in Ethiopia Data/Information User s Perspective, MoA, NAIS Workshop 1997 p 37
5 op cit , p 38
6 op cit , p 1
7 op cit , p 40
8 DPPC/EWD Agricultural Data Position Paper 1997 NAIS Workshop, p 19

3 Inadequate Flow of Information

“Although the appropriate policy framework is in place, inadequate flows of information between line ministries are reported at the Regional, Zonal and Woreda level ”⁹

Inadequate flow of information can be attributed to an unwillingness to share or release information, or to the complexities of the system and the number of levels information must go through until it reaches the top, or to a lack of communication facilities

According to DPPC, “much data does not reach the higher administrative levels or arrives too late to be of any use Valuable data is not used because it never ‘emerges’ from the woredas ”¹⁰ “With a good deal of agricultural statistics (outside of CSA) being generated by RADB (RAB), the matter for concern is the lack of a coordinated transmission (flow) of agricultural information to policy making bodies at national level ”¹¹

4 Non-standardized Methodologies

The lack of standardization of methodologies is a problem that mainly exists between and within regions “The reliability and consistency of regional data could not be judged, as data generated by individual bureaus has not been accompanied by standard methodologies adopted while collecting these data ”¹²

5 Lack of Compatibility

There is agreement that the two most important sources of agricultural information and statistics are incompatible and conflicting As stated in MoA NAIS position paper “Data/Information generated by different agencies often lack compatibility For example, the CSA’s estimate of area, yield and production of major temporary crops differ from the estimates of MOA/FAO Crop Assessment Mission Reports, RADB (RABs) and other sources ”¹³ The reason for these differences is the use of different methodologies without synchronization of information that is released to the public There are also ever changing boundaries at different levels, particularly zones and woredas, therefore, difference will occur if all providers do not make the necessary adjustments when they occur

6 Reliance on Untrained and Unskilled Data Collection Personnel

Regional Agricultural Bureaus use Development Agents to collect the basic agriculture information For Development Agents, collecting agricultural data is a secondary activity for which that have received limited training and often do not have the basic materials or

9 op cit , p 19

10 DPPC/EWD Agricultural Data Position Paper, 1997 NAIS Workshop, p 21

11 Agriculture Information Situation in Ethiopia Data/Information Users Perspective, p 30

12 op cit , p 30

13 op cit , p 37

capabilities to capture the data required. In the DPPC/EWD NAIS position paper it was indicated that poor field reporting is a result of limited infrastructure (transport and communication facilities), inconsistent training, high staff turnover, lack of stationery, no time and low motivation. This position is also supported in other similar position papers prepared by the regional states.

7 There is No Single GFDRE Agency Responsible for Making the Official Crop Production Estimates

Currently the DPPC goes through an “estimation” process of trying to reconcile a forecast of food grain production in November/December of each year that uses numbers from MoA, CSA and the FAO/WFP “rapid assessment” teams to make that forecast “estimate.” This exercise is conducted because there is a lack of sufficient lower level woredas estimates to better “target” the food assistance. This multiplicity of numbers tends to cloud the issue as to whom is responsible.

3.2 Impact of USAID Assistance to CSA under the ASIA Project

This section of the report reviews the impact on the collection and dissemination of agricultural information and statistics of USAID assistance to CSA under phase I of the ASIA project. Specific questions answered are:

- a. How have the quality of agricultural information and statistics collected and reported been enhanced by ASIA?
- b. Is information being collected and disseminated in a timely manner?
- c. How has the system improved as a result of ASIA efforts? Specifically:
 - i. what has been the effect of short-term training on CSA capacity and performance?
 - ii. what has been the effect of long-term training on CSA capacity and performance?
 - iii. what has been the effect of technical assistance on CSA capacity and performance?
- d. What specific problems remain to be addressed?¹⁴

3.2.1 Agricultural Information and Statistics Improvements Under ASIA

There has been some improvement in the way CSA collects and analyzes statistics through the continued efforts of the Resident Advisor (RA) to address issues raised by CSA management, but the improvement has not been as great as expected. Work on the 1999/2000 Forecast Survey started late this year, but CSA is not forecasting any delays in producing the final forecast survey on time. The pilot for the 2000/01 National Agricultural Sample Enumeration (NASE) is behind schedule, but the 1998/99 Forecast Survey was considered to be the most timely and accurate since CSA started conducting crop production forecast surveys in 1980/81. One difficulty with the AgSS is that the methodology utilized by CSA was developed almost 20 years ago and the procedures need enhancing to execute properly. Even though sample size has been increased, new questionnaire designs implemented and data processing checks instituted, there are

frequently problems with the frame expansion factors used for summarization. The RA has been unable to effectively advise on sample design because the correct materials required for review have not been made available to the RA as late as October 1999. In the December 1998 quarterly report of the RA, it was indicated that “the basis of any future ASIA success hinges on a revamping of the AgSS sample design”. A memo to the GM identified the problem and after discussions of the memo with the GM, the RA was promised the “correct” woreda region 1 sampling frame with “correct” woreda identification. At the time of writing this report the RA has yet to receive the “correct” frame.

Short-term training could have had a greater impact on the development of CSA and ASD methodology if all the training programs planned had been carried out. The two-week study tour to the US in mid-June 98 for CSA management was useful since the NASS federal/state working relationship was observed and viewed as a possible model that could be replicated. The High Official Study Tour which was recommended in the mid-term evaluation was finally carried out in January 1999, but the Vice Minister of MEDaC did not go and the Vice Minister of MoA who did go was appointed the head of a new Government parastatal upon his return. In June 1999, three CSA staff members and one from MoA attended a World Bank/FAO/USDA Agricultural Statistics Workshop followed by the African Commission on Agricultural Statistics meeting in Guinea. This undertaking was very useful since participants obtained a better understanding as to what other African countries are doing. Useful contacts were made which could lead to follow-up information exchanges. They also obtained an idea as to the potential usefulness of visiting other countries in relation to the handling of urban and nomadic sampling.

Short-term in-country training during 1999 has not been undertaken even though the need for conducting training in statistical analysis of survey data, and research on “small area estimation” had been recommended. In addition, there was a need to supplement the FoxPro training received in 1998. Even though 3 local firms were invited to submit bids for FoxPro training, which included the development of a tangible product, it was not until August 1999 that two firms finally responded. The two week survey design workshop (June, 1998) was viewed as a success and it did assist participants develop a better survey instrument.

Long-term training did not attain expectations for various reasons as detailed in the Perry report and mid-term evaluation. Four CSA staff members did receive M Sc degrees from Makerere University (MU) in Uganda from a program that is felt to be less effective than what is offered at Addis Ababa University. The MU graduates are back on the job at CSA and they should contribute to the institution, but it is too early to assess their impact. One student at UoB and another at UOFS are half way through their M Sc programs.

Part of the problem in relation to long-term training was that CSA never finalized a training plan that adequately identified the needs, goals and objectives of training for CSA. In addition, there was no initial needs assessment made to determine the number of positions within CSA that require higher education (M Sc), nor to identify all potential candidates, their positions and training completed to date. Also, no detailed search was made of potential educational institutions, their curricula and possible practical training opportunities before the first students departed.

Unfortunately, development of the capacity to provide in-country M Sc training to staff of statistical organizations has not begun. It was recommended in May, 1998 and supported by the mid-term evaluation (December 1998) that ASIA support the institutional capacity building needs of the Addis Ababa University Department of Statistics (AAU/DS). Even though an official proposal from AAU/SD was submitted to MEDaC with USAID endorsement it still has not received approval from the Ministry of Education (MoE) which MEDaC requires before the program is granted USAID funding by MEDaC.

Training in general was hampered by the lack of a cohesive stepwise training plan covering the long-term and short-term both inside and outside of the country with agreement between all parties as to what should be done. For any future single institution project to be successful in training, a comprehensive Human Resource Development Plan should be prepared and approved at the start of the project and modified as the project unfolds.

The RA has provided valuable advice and assistance when it has been requested by CSA. Since the mid-term evaluation, the expertise of the RA has been utilized to a lesser degree than before. The services of the RA were underutilized during his two year in-country contract which expired in mid-July of 1999. Since the end of his in-country contract the RA has supported the ASIA project from his office in the US as well as undertaking TDY assignments to Ethiopia. During the RA's September-October 1999 TDY, he assisted this evaluation team as well as working with CSA. One day prior to his scheduled October 1999 departure, CSA requested that he extend his stay to work on unresolved issues. With the intervention of USAID, agreement was reached between CSA, USAID and the RA as to tasks supporting NASE sampling to be undertaken within a realistic timeframe under the remaining time of the phase I ASIA project.

In the CSA letter of 13 October 1999 to USAID in response to questions raised by the ASIA/ET, CSA had the following comments in relation to TA: "Even though the CSA has a Resident Advisor (RA) for almost two and half years, the CSA could not benefit much from the Technical Assistance as was expected especially in the area of methodology. This was partly due to problem of communication between the relevant Methodology staff members and the RA. However, the CSA was anxious to adopt new methodology in the upcoming Agricultural Census. That was the reason of establishing the Sampling Methodology committee in which the RA was a member. As was mentioned above the problem of communication hindered the process of establishing a new and sound methodology for the upcoming pilot agricultural census effectively. At the moment the CSA and the RA reached at a consensus to test the RA's new sampling approach simultaneously with the conventional unstratified systematic sampling design."¹⁵

The major area of contention is the frame and sample design for National Agriculture Census (NAC) which also impacts on the AgSS. The RA has prepared numerous memos and examples during 1999 with no concurrence from CSA as to what should be done. There has been a management bias at CSA to maintain the status quo on one side with the RA on the other recommending newer statistical theory. Given the importance of carrying out the first National

15 CSA 13 October 1999 letter to USAID in response to answers to evaluation questions requested of CSA response 5 c) iii

Agriculture Census it is critical that both parties agree on the methodology and design before it is undertaken. The RA noted in his December 1998 quarterly report that “no further improvements under ASIA will come about until both parties agree on basic sampling methodology and design.”

3.2.2 Specific Problems to be Addressed Under ASIA Phase I

The most critical problem to be addressed under ASIA is basic survey and sample design, as well as, the methodology to be used for the NAC and the follow-on AgSS. The highest priority needs to be given to having CSA census and survey methodology certified so that valid results can be assured at the desired level of estimation, i.e. woreda level estimates.

Secondly, the drafting of the NAIS charter should be undertaken immediately. Even though MEDaC and USAID have approved the proposal submitted by MoA, this short term technical assistance has not been undertaken. Creation of the charter and following its directives would clarify functions and responsibilities of institutions and thus expedite meeting user's needs. ASIA is an excellent vehicle to achieve this end since its objective encompasses all appropriate Ethiopian institutions involved in agriculture data collection and information processing. A basis for cooperation and coordination could be provided through the drafting of an act establishing the legal basis for NAIS.

The third item has to do with building in-country statistical long-term training capacity. This was recommended by a consultant in the May 1998 concerning Addis Ababa University Department of Statistics (AAU/DS) and reaffirmed by the ASIA mid-term evaluation. Funding the capacity building needs of AAU/DS will most efficiently meet the long-term training needs of CSA. Funding the AAU/DS proposal should also be initiated under the current project, funds permitting.

The fourth item deals with short-term initiatives to support and complete training already begun under ASIA Phase I. The funding of Firew Ayalew's master thesis research (AAU/DS) proposal on the “examination of the urban domain not covered by the AgSS” and Yakob Mudsuir's master thesis research (UOFS) on “small-area estimation” will increase the understanding of new technologies and resolve some outstanding problems.

Fifth, an effective ASIA Steering Committee should be re-implemented with direct guidance from MEDaC and USAID. The committee should also consist of members agreed upon by MEDaC and USAID.

Finally, in-country training on small-area estimation should be carried out as soon as feasible. This process should start with the funding of the masters participant at UOFS in South Africa doing his research and masters thesis on this same topic with the encouragement from the ASIA Statistical Advisor. It is important that his thesis work is coordinated with that of the USDA NASS Research Division, since they are continuing to investigate and research small-area estimation methodology. It is important that this topic continues to be discussed and that research be undertaken as well as testing of system methodology before in-country training is carried out.

There are a number of other areas that need continued work. An effective Steering Committee is necessary to ensure proper ordering and speed of activities, also, the sequencing and pace of implementation. A complete decentralization plan should be developed and a realistic test of SBO capabilities carried out before additional equipment is purchased. The use of GPS for developing frames and resource-based points around the lowest possible administrative unit should continue to be explored with other interested parties such as DPPC, FEWS and WFP. This will require continual local coordination if it is to work.

If ASIA were broadened beyond CSA, a local Amharic speaking coordinator familiar with regional bureaus and government, data collection, USDA methodology and demonstrated management skills is needed to supplement USDA TDY support.

One area that needs improvement is the execution of the project. Both MEDaC and CSA feel that the way project management is currently structured is not acceptable. CSAs written response stated that “most of the decisions are made by NASS and for every operations be it procurement of equipment and supplies, training, workshop etc CSA has to get the clearance from NASS. This is a very awkward and expensive approach of implementing a project because for every little issue one has to either call, fax, or E-mail NASS and get their consensus. Hence, most of the times these exercise takes a long time and will create problems in executing the various activities as originally scheduled”¹⁶. The Vice Minister of MEDaC mentioned NASS sending a representative from the US to pay the expenses for a workshop that cost US\$ 6,000 which shows a lack of confidence in the handling of funds by CSA. The RA also mentioned that there needs to be a mechanism set-up for expending funds locally while still maintaining accountability.

To better understand this problem it is important to recognize that USAID gave funds to USDA to implement ASIA. USAID did not reserve project funds in-country for direct in-country disbursements. Under a modified ASIA or new initiative this can be changed, but until such time the necessary changes are made, USDA as a government agency has certain regulations they must follow to ensure and demonstrate that US taxpayer money is being spent in a fiscally responsible manner.

3.3 Options for Improving the Collection and Timely Dissemination of Agricultural Information and Statistics

This section looks at institutions, their interests and roles, and possible options for improvement of agricultural information and statistics. Specific topics of discussion are:

- a Which institutions have a vested operational interest in collecting and disseminating agricultural information and statistics? What are their specific interests?
- b Which institutions have a vested operational interest in having timely access to agricultural information and statistics? What are their specific needs?
- c How could the roles and responsibilities of the institutions currently involved in the system, and those described above, be modified to improve the system?

16 op cit, 5 d)

- d What are the possible options for ensuring effective cooperation/collaboration between these institutions to improve the present system?
- e What other data (crop conditions, rainfall, etc) and services (meteorology, landsat imagery, etc) should form part of an integrated effort?¹⁷

All major institutions with vested operational interest in collection and dissemination of agricultural information and statistics are given in Table 1. The columns for data collection and dissemination list the specific types of data items of interest and reflect the organization's needs. All organizations, except CSA, are both data gatherers and users. Most collect data related to their work out of necessity rather than choice.

The table does not contain some institutions that are primarily data users like National Fertilizer Industry Agency, National Seed Industry Agency, Agricultural Inputs Supply Corporation, etc. They do need some basic information like crop area planted, production, and farm inputs and practices to assist them with their business plans. They also gather detailed data during the course of business, but these items relate mostly to their administrative operations (purchases, sales, transportation costs, margins, etc). Dissemination of administrative data is usually restricted to internal use or to government regulatory offices. A few organizations, like the Coffee and Tea Development Authority, are parastatals controlling a whole sub-sector. Information about these sub-sectors go to government offices and are released to the general public only as they see fit.

One can see that the data items of interest and need vary greatly depending on the institution's function. If one were to try and list the specific items of interest for each organization, the numbers would range from a few into the hundreds depending on the organization. The NAIS workshop paper by the head of Management Information and Systems at MoA and responsible for NAIS includes an appendix of 32 pages summarizing data entities and elements required by various sectors in MoA.¹⁸ The number of items needed should be somewhat less, as one is usually interested in more than what is actually feasible.

One of the biggest complaints of institutions interviewed was that the data was not available when they needed it. Every institution wants timely information, but what one considers to be timely others would say it is too late. Data users must have the information in time to make their critical program decisions. For instance, EGTE needs grain price information on a daily basis. Their staff spread out over their 64 stations to each local market to gather the sale prices and volumes of grain on every market day. This data can be used to determine daily purchases and sales, but can also be summarized to weekly, monthly, quarterly or annually figures for use by others with less stringent timetables. The many institutions involved in early warning work need data on biweekly or monthly basis and since it is not available, at times, have to go out and gather it themselves.

17 Revised Statement of Work, p. 2

18 Gebremariam, Woldemeskel. MoA Institutional Position Paper on Agricultural Information System. NAIS Workshop, 1997, p. 1 – xxxii.

When one begins to design a survey system, specific data items have to be reviewed and the most important items with widest interest selected for collection and dissemination. The user's timeliness needs should also be a major consideration in the survey design. If data gathered is to meet the most frequent requirements, then aggregation to other levels is relatively easy. The survey plan will designate a logical sequence and timetable for collection, summarization and publication of information.

3.3.1 Modification Options to Improve the Statistical Information System

In section 3.1.2 it was found that the current information system has many weaknesses: data gaps due to items not available or not at the administrative level needed, inaccuracies and inconsistencies due to different or inadequate methodologies, and very limited coordination or collaboration and inadequate bi-directional flows of information. Under these present circumstances all organizations feel they are forced by default, to collect and disseminate the data themselves that they require. Otherwise, their organization could not execute effectively their mandate. In cases of duplication, much of the data needed is common to other institutions, leading to duplication of effort and wasted resources. Since organizations have different mandates, the procedures they use to make estimates will differ and that can cause great confusion to those who must make decisions based on the inconsistent information from different providers.

Every organization that we talked with had knowledge of the problems, inconsistencies, lack of synchronization of information and procedures. Few were willing to speculate on the causes of these problems and few offered possible solutions. Experience in other countries has shown that when problems and constraints are common knowledge throughout all ministries and private organizations, a possible cause could be that higher government officials are having difficulties correcting the situation.

The importance of communication as a building block for forging linkages between organizations, has been discussed earlier in this report. Communication is poor or non-existent, therefore linkages are the same. **Clearly, a change in organizational attitudes is necessary before much cooperation and collaboration will take place.** If the attitudes of organizations can be changed to work together and share information, then the combined "synergistic vigor" could meet more of the agricultural sector requirements. An important benefit would be that all providers could take pride in their work and have confidence in their results.

There is little that external technical assistance can do to create or ensure effective cooperation/collaboration between institutions, this requires internal initiative. Some cooperation has been fostered between working level units of organizations, when management has facilitated the cooperation. When such willingness to cooperate is demonstrated by an organization, then some external technical assistance can be effective to expedite common tasks, i.e., providing materials, suggesting alternatives, supplying communication devices, providing new technology and training just to name a few areas.

The ideal statistical system would be to have one organization collect all data needed by every institution. This would reduce the burden on respondents and be much less costly. This organization should be completely objective in gathering, processing and reporting true information to all persons and organizations. A single organization would keep individual farmer's or reporter's personal data confidential. There would be only one accurate estimate for each data item and it would be disseminated in time and at the level of aggregation that the user needs.

One seldom has the ideal system. Fortunately, Ethiopia has the potential to develop a viable agricultural information and statistics system, in that they have two organizations with existing infrastructure that could be utilized to supply data required to further the development process. The CSA has a structure of SBOs and some experience with statistical procedures. The MoA through the RAB DA network has broad-based access to coverage of all agricultural economic areas. RABs are currently gathering a lot of data relevant to the sector. Unfortunately, neither organization is coming close to meeting the needs of the data users.

There is potential to develop a viable agricultural information and statistics system. There are problems to be solved, and slowly but surely a system is evolving. To start with, there must be a stance taken by the government that creates an environment where "true" and "accurate" statistics provided in a timely fashion are more important than politically palatable numbers. Tamrat Bekele in his October 8, 1999 Letter from the Editor (Addis Tribune) editorializes that "Official withholding and suppression of statistical information has also engendered the bureaucratic feeling that when any such information is released all care should be taken to ensure that on the whole it reflects well of the government, thereby leading to all sorts of statistical manipulation popularly referred to as "massaging", "doctoring" and "cooking". The information gap is causing a lot of difficulties for everybody, including the private press. Let every government institution and private enterprise generate statistical information which it deems useful on its operations and disseminate it to whoever asks for it without discrimination."¹⁹

It is important that decision-makers work from the "true" basis, even if presently unpleasant. Knowing the "true" state of the agricultural sector, then planners and decision makers can, through planned strategies, assist in bringing that sector to the desired state. Donors would probably be more willing to assist with the implementation of strategies if they were based on solid information, instead of from a stormy sea of fabricated numbers.

Once the decision is made to have accurate statistics, then laws or mandates can be made, implemented and enforced. The NAIS charter could be a start in this direction. A structure needs to be set up, with clearly defined work for each organization. Communication, collaboration and linkages between organizations must be formed and functioning. This will mean putting aside personal power struggles and competition for the benefit of the country. Statistical organizations need to be shielded from political and external influences to change numbers from their "true" values. The information given by farmers, reporters and businesses must be kept confidential and not given to regulatory, tax or political authorities. If not, "accurate" information will be hard to

19 Bekele, Tamrat, Letter from the Editor, Addis Tribune, October 8, 1999 p. 2

elicit It is important that workers in statistical organizations are compensated commensurate with the work and responsibility that they have

One might envision an information system where CSA would improve what they are presently doing to meet more of the users needs With further staff training they could improve their statistical capabilities and become a leader to assist other organizations to improve their methodologies Irrespective of what CSA does, MoA with its broad coverage of the country should continue gathering detailed grassroots quantitative and qualitative type information The DAs should be given training to better gather data as well as being supported with simple equipment and supplies RABs need technical assistance to better access their data needs and how best too most efficiently provide this data Communication linkages to expedite the exchange of information up and down the chain from Peasant Association to national levels needs to be strengthened Cooperation with other institutions would be fostered and free exchange of information would take place as a benefit to all The data gathering organizations, mainly CSA and MoA, would meet more of the users needs, and eventually most of the present institutions would become strictly users of the basic information They then would only have to gather their own administrative and specialized unique data The statistical organizations would have sampling frames and trained staff to carry out special studies for government and other organizations, perhaps on a reimbursable basis

Another information structure option is to combine the agricultural information and statistical functions into one organization This would be a serious consideration if the MEDaC statistical gap matrix were to be seriously addressed This might be difficult to set up and manage, but necessary when attempting to fill all the data gaps of the country as a whole

Until improvements are made, how does one provide technical assistance under the present system? It is very hard to change decades of different ideological, political and cultural training Since little cooperation/collaboration exists between institutions, donors can still work with individual organizations in the hope that some cooperation can be fostered When a glimmer of success is noted, it can be encouraged or rewarded through additional technical assistance to further the progress One can continue to extol the virtues of cooperation and collaboration by demonstrating any small success

Modification of roles and responsibilities to improve the statistical system will be difficult given the present inertia However, one can keep trying to foster improvements to willing offices and staff, in hopes that other institutions will see the successes and be encouraged to implement similar improvements

3 3 2 Other Data and Services to Consider

There are possibilities for new data (crop conditions, rainfall, etc) variables to be used in modeling and statistics New technology (GPS, landsat imagery, etc) can afford some exciting opportunities for improvement and integration into the statistical system Some of these will be discussed in later sections on suggested future plans and recommendations But one would caution that these should be introduced when the system is ready to utilize the technologies and

benefit from them. Too often organizations want the newest and most sophisticated technical equipment and techniques, but find that they don't have the training and expertise to use them, so the equipment sits and gathers dust or is used for unintended purposes outside their mandate.

Before an organization moves to the advanced techniques and methods, they should master the simpler tasks. It is felt that there are many things that can be done to improve the agricultural information and statistics in the near term:

- Train DAs and other data gatherers to perform their assigned tasks more efficiently and accurately,
- Train data processors and handlers at Woreda, Zonal, Regional levels to do their work effectively with minimal errors,
- Assist in the communication of data as it goes up the hierarchy,
- Assist with coordination and transportation problems, and
- Provide inexpensive supplies and equipment to enable workers to better perform their duties.

Once the above mentioned functions are being carried out on a regular basis, in a timely manner, then the expansion of statistical coverage can be explored, including the more sophisticated and expensive techniques.

4 Recommendations on the Collection, Dissemination and Effective Use of Agricultural Information

This section of the report recommends short and medium term action that could assist in meeting the long term objective of establishing an efficiently functioning integrated system which collects and disseminates agricultural information and statistics in a timely manner for effective use by governments, private and public organizations, and farmers. Specific points discussed are:

- a. what steps/actions should the GFDRE take in the short run (1 year) to improve and strengthen the effectiveness and performance of the present system?
- b. what steps/actions should the GFDRE take in the medium term (5 years) to improve and strengthen the effectiveness and performance of the present system?
- c. which of the steps/actions identified above are highest priority? why?²⁰

The highest priority for support to the GFDRE should be establishing an efficient and effective system of collecting and disseminating agricultural statistics. This can only be done if the main providers (CSA and MoA) are collaborating on a regular basis. The agricultural based data gathering and statistical work carried out independently by each organization is very important. The ET views the current institutional attitudes as adversarial-defensive instead of acceptance-supportive. The strengths and weaknesses of each must be understood and appreciated. Common problems should be addressed and solved. Any estimates provided by either one of the organizations could be discussed with the other. There will continue to be largely unfulfilled user needs until CSA and MoA are working within a collaborative environment.

Government has already expended a considerable amount of resources in addressing the problem of data compatibility and synchronization without significant tangible results. Before the end of the year MEDaC is planning to hold a workshop on statistical gaps. The exercise of identifying gaps and proposing solutions has been an on-going exercise for the last 5 years or more. Additionally, MoA plans to hold another NAIS workshop. Workshops tend to heighten awareness of problems or situations requiring solutions and create a forum for agreement, but they are not the best vehicles for bringing about organizational and individual behavioral changes. It takes a proper legal framework with clear mandates, responsibilities and authorities to bring on lasting change.

4.1 Recommendations for the Short Term (1 year)

There are two parts to actions recommended in the short term. The first part deals with those activities that can be supported under the current ASIA initiative. The second deals with actions that can be carried out within the next year, which would either require another “no cost” extension to ASIA phase I or new Agricultural Information System initiative.

4.1.1 Completion of ASIA Phase I Tasks Initiated or Approved

Phase I “no cost” extension of ASIA only runs through the end of 1999. Within that remaining time period commitments can be made to support the following on-going or previously approved activities:

- **Funding and participating in the drafting of the NAIS charter**
USAID and MEDaC have already approved the proposal submitted by MoA, therefore all that is required is to give USDA the go ahead. The charter would specify and clarify the roles and responsibilities of the key agricultural information providers and the linkages between each. The team would consist of local and international legal and organizational experts.
- **NASE (NAC) certification**
Any funding for a Census of Agriculture should be contingent on the sampling frame and methodology being reviewed and verified by a qualified expert supervised by USDA. Someone from AAU/SD or USDA could be a possible consultant for the job. CSA should place census methodology verification as their highest priority before commencing on the full agricultural census. This will require increased utilization of the RA.
- **Complete computer and equipment installation for the 4 SBOs and carry-out a test of branch capabilities**
Some equipment is already in place at the SBOs, while the remainder is either waiting distribution from CSA HQ or in transit to CSA. USDA should persist in their requirements for tests to the SBO system and processing procedures. These tests should have a large enough volume of data of sufficient difficulty so a determination can be made on the SBOs performance on data entry, cleaning, and data transfer to HQ. A possible test might be to process a survey’s questionnaires twice and compare the results of the data processed in the

SBO's with that at the national level. It would be nice if the test was done in accordance with an approved implementation plan.

- **Full funding for the two CSA staff members pursuing Masters degrees**

Funding should be continued for the two students pursuing MSc degrees at UOFS and UoB since both have completed one year of a two year program.

- **Support masters' students with their thesis preparation**

One MSc student needs supplemental financial assistance to complete his research that will examine the CSA urban sampling frame domain not covered by the AgSS. Another MSc student is planning to do a thesis on "small area estimation". Completion of both theses would directly benefit CSA through improved AgSS estimation when implemented.

- **Reviving the ASIA Oversight (Steering) Committee**

The ASIA Steering Committee should be revived at the earliest possible opportunity, particularly if USAID decides to extend the ASIA program. The committee was first established in order to broaden the number of institutions involved with the ASIA project and to set achievable goals and activities that could be monitored by an independent oversight body. The committee was also viewed as providing a good opportunity for the main providers of agricultural statistics to work together to fulfill a common objective. The structure of the committee should be revised. It should have the GM and DGM of CSA, MoA-MI&S Director, AAU/SD, DPPC-EWD, Bi-lateral Desk Officer of MEDaC, and representatives of USAID-ANR, and USDA. MEDaC and USAID should approve the committee's membership. The chairman of the committee could be a representative from the Prime Ministers Office.

4.1.2 GFDRE Short Term Priorities Within an Enhanced ASIA Under the New USAID SO as a Revised ASIA

Support of CSA has been on going for more than two years with limited success. During that time many tasks specified in the PASA needed additional work if they were to be accomplished. Since ASIA funds have been obligated and critical activities are waiting word from USAID to release a freeze on the ASIA program initiatives, USDA should be given the authority to expend funds as long as the activities coincide with the objectives of the original PASA and are in harmony with the revised USAID agricultural SO under which the project falls. Immediate assistance should be extended to other organizations where it is felt a contribution can be made towards a substantial improvement to the agricultural information collection and dissemination system as a whole.

- **Testing of a certified design for a National Agriculture Census (NAC – previously referred to as the NASE)**

Given that the sample design for a National Agriculture Census has not been certified (approved by USDA), a substantive pilot survey cannot be conducted until the 2000/1 agricultural season with the census coinciding with AgSS forecast activities. GFDRE should request from USAID whatever technical assistance is required to meet this timetable as well.

as in-country training, computers and supplemental survey equipment to support the successful implementation of the NAC. CSA has a sufficiently large fleet of vehicles and supervisory staff, but that staff will need supplementing for a sample size of 10,600 EAs. For a census to be successful, physical and human resources will have to be drawn from other ministries, particularly MoA and the RABs. A census is a good way to build closer working relationships between CSA, MoA and RABs. CSA tasks and performance should be monitored and certified by qualified experts during major milestones of the census activity. Financial support should be based on meeting the agreed upon targets. The ASIA steering committee could serve as an excellent vehicle for NAC oversight.

- **Up-grading of AAU/SD**

In the short term, emphasis should continue to be placed on fostering cooperative arrangements with interested universities. ASIA activities should be authorized to extend assistance and support for the preparation of teaching materials and manuals, subscriptions to appropriate journals, reference materials and updated data processing equipment and software to appropriate Ethiopian institutions of higher learning.

For a longer-term solution to the training problem, identification of potential Ph D candidates from AAU/SD should begin immediately for consideration of placement in a US University program. It is expected that one faculty member would start the program each year. Perhaps exchange professors on a TDY basis from other universities could strengthen the department until those successful Ph D candidates return. Upgrading of AAU/SD was recommended in May 1998 and supported by the ASIA mid-term evaluation of December 1998. Strengthening AAU/SD would make it possible to have most M Sc statistical level training done in country. This supports the GFRDE objective of capacity building within Ethiopia.

- **Conducting short-term in-country training for professional statistical staff**

There are a number of short-term in-country training opportunities that could be exploited that would assist with NAC preparations and general survey management/administration. CSA requested training in sampling, data analysis, report writing and small-area estimation at the beginning of 1999. These short term training initiatives are still to be carried out. Given that USDA needs a lead-time of approximately three months, the earliest that these courses can be conducted is next year. Before any courses are scheduled it is important that a firm list of participants are provided by all institutions (CSA, MoA, RAB, DPPC and AAU/SD) that are interested in the training to be offered. In most cases, training could be arranged in a shorter period if there was an annual training plan that could be followed. Background of students should be provided to the training organization to assure that training is tailored properly to fill the needs of the participants and that they have sufficient credentials to benefit from the training. Also, the background information will assist trainers to adapt the courses to meet organizational needs.

- **Training of RAB Development Agents**

The new USAID initiative planned for the Amhara region affords an opportunity to assist with improvement of existing regional statistical programs. If successful in the Amhara region, the concepts developed could be initiated in other regions. DAs are found in all PAs and gather data at the grassroots level. Training and assistance to Woreda Development Centers could greatly improve the quality and timeliness of the data delivered to higher levels. Improved communication with the woreda office should be fostered through a better feedback loop. Sometimes just supplying paper, notebooks, pens can improve information flows, but cooperation is needed in both directions. Perhaps supplying a bicycle or equine for the DA or a motorcycle for the supervisor during their work will greatly speed up questionnaire distribution and the data collection process. Some suggested topics for training are: importance of agricultural statistics, how they are used at different organizational levels, importance of timeliness, subjective observation and representative measurement techniques, recording techniques and supplies, farmer interview techniques, development of simple recording/reporting forms. ASIA/ET believes it would be beneficial to have an Ethiopian counterpart hired to work with the project activities. It is especially important if the future project work is at the woreda level in concert with DAs.

- **Assisting DPPC to improve information collection systems outside of agriculture**

USAID has requested the ASIA/ET to look at the information needed to establish a baseline in Amhara region for the purpose of identification and tracking of the principal indicators to be identified, efficiently gathered and monitored on a periodic basis. This requires that information be obtained from health, education, meteorology and mapping authorities at the regional level. DPPC is doing a good job of compiling baseline information from a variety of sources, but they still have not completed this task at all woredas in the country. DPPC could benefit from support to do their job more efficiently since they have identified their statistical gaps. It is important to support DPPC activities with technical assistance, training, data processing and communication equipment.

4.2 Medium Term (years 2 - 5)

A medium term action plan should be centered on two complimentary strategies. The first is to assist with federal level agricultural information problems that impact on the country as a whole. The second is to assist one regional government to develop an efficient and effective agricultural information collection and dissemination system that has the potential to be replicated in other regions. The link between the two strategies should be the type of legal framework to be provided through the development of the NAIS charter.

4.2.1 Federal Initiatives

- **Conducting the NAC (or NASE)**

It is envisioned that the NAC will be conducted during the 2000/01 agricultural season. Given all the activities that need to be completed prior to the census, even targeting the census for the 2001/02 agricultural season might be optimistic. During the medium term,

emphasis needs to be placed on improving the quantitative and objective estimation process so that future AgSS include woreda level estimates for a specific number of food grains and livestock. At the same time, there should be investigations as how best to gather qualitative and subjective measures needed for early warning and welfare assessments that can meet more user needs. These measures should be similar to the techniques utilized by USDA/NASS in the crop weather and condition program.

- **Upgrading AAU/SD**

With a medium term objective, emphasis should be placed on up-grading the qualifications of the AAU/SD faculty to support an expanded M Sc program by offering Ph D educational opportunities in the US. There should be funding support for frequent exchange of staff with a “sister” US University. Staff from the USDA graduate school should also be made available to support an exchange program and special seminars. There is an immediate need for ASIA to begin a continuous flow of technical reference materials, software and equipment so that the statistical department becomes and remains current on the latest techniques. USAID should authorize USDA to begin execution of the AAU/SD funding proposal to support medium term capacity building to supply M Sc trained professionals to GFDRE organizations.

- **Master’s level training in the US for capacity building for information systems**

Long-term masters training in the US is viewed as an excellent medium for upgrading skills as well as increasing understanding between the US and Ethiopia. If qualified candidates are identified from participating organizations, an expanded program to support future statistical information improvements requires a program of study to begin as soon as possible, so that overall improvement in statistical capabilities can be realized. CSA is a logical organization to be recipients of such a program, but it was not accomplished under ASIA. Alternative organizations participating in an expanded effort need a similar opportunity for capacity building.

- **Cooperative Donor Support for NAIS**

Continual development and refinement of NAIS should be done with the support from multi-donors since it is an activity that will require a substantial amount of support over an extended period. Donors are encouraged to work together to also foster greater cooperation and collaboration among Ethiopian institutions in support of the NAIS and its objective to create a medium for enhancement of data exchange between GFDRE offices.

- **TA**

A mechanism should be put in place whereby participating GFDRE organizations can obtain short term technical assistance within a reasonable timeframe after making a request. Too often a TA arrives and the supporting organization is not prepared to supply the needed staff expertise and TA time winds up not being used efficiently. Some organizations have an attitude that TA is just an avenue for obtaining high cost items, i.e. vehicles, computer equipment and overseas training. TA serves little purpose if it is not put to effective use. For more effective execution of future TA, a general schedule of TA visits should be developed.

with exact objectives to be achieved and timeframes specified. When general schedules are specified in advance, then TA should be initiated more quickly upon request.

4.2.2 Regional Initiatives

The regional and HQ initiatives will require access to and the availability of a full-time Ethiopian employee of the project. This person should be self-motivated and have the ability to work independently with limited supervision. A prime selection characteristic for this position will be the experience and reputation of the individual and their professional work ethic and personal integrity. The individual should be familiar with training and supervision of data collection staff at the woreda level and familiar with USDA/NASS crop and livestock estimation methodology. Management experience of both professionals and field staff, recent experience with new concepts in questionnaire and data collection is also important. The two main institutions targeted for support are the RAB and DPPC.

- **Support to Amhara RAB**

Up-grading the information collection and dissemination capabilities of the Amhara RAB is important since USAID is focusing their development assistance in that region and the RAB is the focal point provider of agricultural information down to the woreda level. Initial concentration on one region makes sense since it is necessary to demonstrate that a regional concept can be carried out effectively. The regional effort should be considered a pilot effort to enhance the collection and dissemination of agricultural information in a timely fashion with a high degree of accuracy that users require. Support should be in the form of technical assistance, training, data processing and communication equipment. The amount and form of TA should be based on the RAB meeting pre-determined targets of success.

- **Support to Amhara DPPC**

DPPC should also receive TA since they are performing as a data resource bank of information that is needed for determining household well-being on a continual basis through their early warning initiatives. They have compiled the best available and most comprehensive baseline set of information, which still needs to be completely compiled for the entire region. This program requires technical assistance, training, data processing and communication equipment be provided to the various levels of administration that DPPC collaborates.

4.3 Prioritization of Steps/Actions

- **Drafting the NAIS Charter**

Drafting the charter is considered to be of the highest priority since it could be the vehicle that clarifies the roles and responsibilities of the key agricultural information providers and the linkages between users and providers. Part of the work on the charter would be the initial development of an organizational manual that includes the structure of the system and the flow of information from the respondent to the federal government and back again.

- **Certifying NAC design and methodology**

There is almost universal agreement that an agricultural census (NAC) should be carried out as soon as possible. A NAC has never been carried out in Ethiopia. It is important that it is carried out as soon as possible since it would yield a more complete picture of agriculture in Ethiopia. The NAC would also assist in the development of an improved system of data collection by DAs. Before any additional funds are expended, it will be necessary to agree on the methodology to be utilized and to assure that the most efficient design will provide a true reflection of the actual situation. This process can only be started if CSA allows USDA technicians access to the sampling frame, an event that has not happened since the RA took up his post at CSA in July 1997.

- **Standardizing and Synchronizing Agricultural Data**

Any data collected should be done in such a way that it could be related to information that already exists or is required. There is a need for agreement by all government institutions on what should be collected and on how it should be collected. It is important that physical boundaries of the lowest level administrative unit are provided regularly to all information providers, so that when an administrative unit is referred to by a provider in their information the exact same areas are used. When putting together time series data it is particularly important that the data relate to the same units. Priority should be given to solving the incompatibility issue that exists between agricultural data provided by CSA and MoA through RABs. MoA/RAB data can only be synchronized with CSA and visa versa if the institutions are working in a collaborative mode. Using subjective and quantitative information together is important if woreda level estimates are to be provided on a regular basis.

- **Completing on-going ASIA initiatives**

The funding for two theses and the testing of SBO data entry and processing capabilities should receive a high priority because they can be done at a very small cost while presenting opportunities that can favorably impact on how CSA conducts its work. Both theses can assist with improving future AgSS coverage, whereas SBO computerization can lead to smaller non-sampling errors by being able to check inaccuracies sooner.

- **Upgrading AAU/SD**

There is a large unfilled need for statisticians both in the public and private sector. This need can be met to a greater degree and at a lower cost, when compared to off-shore training, if AAU/SD staff and facilities are up-graded. Additionally, support can be given to students that are interested in researching current statistical problems in Ethiopia.

- **Establishing Stronger Institutional Relationship(Linkages) with Other Providers**

Stronger institutional relationship should be established with MoA, RABs, PMO and DDPC as well as CSA (MEDaC) within government, and FAO, WFP, WB, EU and NGOs outside of government. The gap between what information is provided and needed can only be tackled within a collaborative environment. Therefore, assistance should be extended to those that really want help and will put it to good use. Given that users rely more on MoA (RAB)

subjective data than CSA objective data, an emphasis should be placed on extending assistance to RAB. Since USAID is concentrating their development efforts in Amhara, assistance there should also be extended to RAB and DPPC so that collection and dissemination methodologies could be improved and a good baseline established.

- **Supporting the NAC after design certification**

Supporting the NAC has a lower priority than what might be expected. For support to be provided for the NAC, the survey design and methodology to be used must be certified. In addition, NAC requires a high degree of cooperation from RABs and MoA whose staff will supplement CSA staff in carrying out the enumeration. It was hoped that there would be a stronger working relationship between CSA and MoA/RABs after the ASIA mid-term evaluation, but that has not happened. Both issues should be addressed.

4.4 Amhara Region – Information for Baseline and Tracking Principal Indicators

USAID/Ethiopia is in the initial implementation stages of an agricultural program focused on the Amhara Region. There is a need to establish baselines and track the principal indicators that can be used to monitor the program's effect. Specific questions answered in this section are:

- a. How can data be most efficiently collected for baseline purposes, and then systematically collected and disseminated to inform implementation organizations? Examples of data needed are: crop production, market prices, household income and nutritional information.
 - i. Who should be responsible for developing and maintaining the sampling frame at regional level?
 - ii. What institutions/organizations are most capable of collecting the information?
 - iii. What institutions/organizations are most capable of disseminating the information?
 - iv. What are the most appropriate dissemination mechanisms (radio, TV, internet, bulletins, FAX, etc.)?
- b. What is the most practical means of involving interested non-governmental organizations in the process?
- c. What alternative information collection mechanisms might be utilized to meet performance reporting requirements on a regional basis?²¹

The purpose of the work in Amhara National Regional State (ANRS) is to reduce food insecurity through increased rural household production and productivity. This is a joint USAID/Ethiopia, GFDRE and ANRS program. The initial assistance will take place in the 47 chronically food insecure woredas. The focus will be to increase food availability, cash income and improved nutrition for the rural households in those areas.

21 Revised Statement of Work, p. 2-3

4 4 1 Baseline and Monitoring Information

Information about the rural population is key to creating the baseline and subsequent ability to monitor assistance program effectiveness. The farmer (holder) and rural farming household will be the primary sources of the data for baseline estimates. Household income and nutrition information can only be obtained (monitored) from households, crop production obtained from holders, and market prices can best be obtained directly from the marketplace. Information about availability and use of financing to the farmer (holder), markets and new technology can be obtained from the providing institutions, but the affect on the rural family is best measured on a questionnaire by direct interview techniques.

The exact data items to be used for determining baseline and monitoring effectiveness will have to be decided through discussions. The family's nutrition levels, financial condition, savings, knowledge of new technology and level of off farm employment will need to be measured before any program begins. As the program progresses, then indicator items are measured at specified intervals to determine current relative status.

4 4 1 1 Information Monitoring/Sampling Frame

A monitoring frame needs to be constructed and maintained throughout any future program to assure that baseline data and monitoring information faithfully represents program impact on the rural population. CSA as an organization maintains a sampling frame obtained from the 1994 Population and Housing Census for the purpose of selecting Enumeration Areas (EAs) as primary sampling units (PSUs) for conducting various surveys about the Ethiopian population. This CSA sampling frame does not have detailed and up-to-date information sufficient to meet the needs for efficient sampling and optimum sample allocation.

A logical starting point would be to see what information is available or can be obtained at the Peasant Association (PA) level. The PA level information would be consolidated at the woreda level. Since the PA is the lowest official administrative body and its official physical boundaries available from an organization under the Prime Minister's Office, this boundary identification could be used to help validate the frame construction process.

Development Agents (DAs) could use PA maps to track the village agriculture in their area of responsibility. The DA in collaboration with the PA administrator could record number of farm holdings by type, livestock, cultivated and crop areas, etc. Lacking actual maps, a substitute map source should be sought from the Ethiopian Mapping Authority (EMA) or through the use of satellite imagery. GPS could be used to identify PA boundaries ultimately tying them together at the woreda level on imagery or maps. The DPPC and WFP have information about chronically insecure food woredas that should be correlated with the maps and incorporated into the monitoring frame.

Since NGOs are supporting various assistance programs related to monitoring different aspects of the rural sector, monitoring/sampling frame development should begin with a review of possible source materials from these organizations. These materials might vary from region to

region, as well as from PA to woreda. In the beginning, a suitable frame may not need to be very fancy or sophisticated, however, a true sampling frame to be valid must give every sampling unit (household or holder) a chance of being selected once, and only once, with a known probability of selection. Estimates derived from a frame will be more efficient if the sampling units can be grouped using some form of stratification requiring auxiliary data on the frame for classification purposes.

A monitoring frame attempts to provide the same household (holder) representation at the woreda level, but the data collected from such a frame is usually subjective in nature for all reporting units as a whole, and not based on randomly selected individual household (holder) data. Thus, the emphasis on the monitoring frame development is on creating the proper “weights” for making the subjective information representative at the next higher levels of aggregation (zone and region).

DAs are the most likely individuals at the lowest administrative level to have or to be able to relate to the needed materials necessary for monitoring/sampling frame construction. The DAs will need training for them to better understand the vested interest they have for a sound framework of information. The DA supplies the input from which they ultimately are the recipients via the feedback mechanism from which they can do their job better. The monitoring system can be designed to keep the frame updated and current. The DA has many duties already and the RABs need to support the concept of assigning new and different responsibilities.

Under the current structure of the RAB, the DA appears to be the logical choice to provide the input data into a monitoring system for woreda level information. Questionnaire data would be completed by the DA and collected by the woreda. Aggregated data for the woreda would be submitted to the appropriated zonal office and later passed on to the RAB. Conceptually, the data flow would take place using traditional physical transfer of the data. Eventually, the National Agricultural Information System (NAIS) will provide a conduit for the transmission of data to higher levels for aggregation, summarization and estimation purposes. In zones participating in the pilot NAIS, a monitoring system should be established to test the conceptual ideas of data collection and transfer of information. The NAIS should also be connected in the pilot zones to the DPPC office that needs monitoring data. Other organizations may also need to be included in this pilot program. The DPPC, WFP and other institutions/NGOs need to be involved and should contribute their support for the development and maintenance of any futuristic data collection, summarization and estimation process that helps constitute an information system in Ethiopia.

It should be noted that CSA is not currently in a position to support collection of data for a woreda monitoring system. The CSA basic sampling unit (PSU) is the EA and it is unknown to the DA. CSA could be responsive if they change their sampling methodology. They have the opportunity with the NAC to capitalize on the NAC woreda level sampling methodology and to adapt that design to subsequent AgSS. This design could be incorporated into a monitoring sample that utilizes repeated measures (visits) to a panel of households (holders). A CSA monitoring sample would still require “weighting” the individual household data to make it representative for the woreda and for aggregation to higher levels of summarization and analysis.

4 4 1 2 Institutions/Organizations to Collect Information

There are numerous organizations gathering data at the woreda level. The EGTE gathers grain prices at the local markets throughout woredas using their own enumeration staff, and then make their own independent estimates of production. The DPPC and other NGO food assistance organizations do subjective assessments of crop production, health, and nutrition. These organizations have experience computing indexes like kilocalorie that is the tool of choice used for determining the basis for food assistance needs and distribution.

Currently the DA is best organized and closest to the holder and the rural household. In a futuristic information system, the DAs are in the best position to gather both qualitative and quantitative data. If enumerators are hired to supplement the DA work in a specific PA, more quantitative data could be gathered in a more timely and accurate manner. The DA's duties to administer RAB programs around their area of responsibility, in general, make the DA the most logical choice to provide subjective qualitative data.

Each user organization would need to make a contribution towards insuring the quality and timeliness of the data collection effort. A supervision network for the DA and field enumerator needs to be established and trained. A woreda level office should have the responsibility for supervision and transmission of data to the proper zonal level office. Zonal offices need training and equipment to support their role as a result of added responsibilities. Computers and telecommunications are needed to link into the NAIS in the future. In lieu of the availability of the NAIS, office equipment and transportation means will be needed to support the data collection effort for both levels of zonal and RAB offices. Regardless, the DA to RAB directional flow of data/information is the primary channel for any futuristic information system.

4 4 1 3 Institutions/Organizations to Disseminate Information

Several institutions are involved in dissemination of information. EGTE price information is broadcast on the radio, early warning and food assistance agencies publish their results in periodic bulletins. The MoA extension program provides advice and assistance to the farmers in their programs. All of these organizations would probably be supportive and help disseminate the information. The organization that is most enthusiastic about the dissemination effort could be chosen to spearhead the operation.

4 4 1 4 Appropriate Information Dissemination Mechanisms

The most appropriate mechanism for dissemination depends on the type of information and the target audience. The table below gives one logical scenario for getting the information out.

Source	Audience			
	PA, FA	Woreda	Region	National
DA	X			
Radio	X	X		
TV			X	X
Internet			X	X
Fax			X	X
Bulletins	X	X	X	X

The PA or FA dissemination may need to be by word of mouth or radio as some PAs do not have electricity at all or it is very unreliable. Some woredas or zones may not have internet or fax capability. The type of information affects the urgency and importance of dissemination to various administrative levels. Daily prices for crops and livestock are important to the farmer and trader at the PA and woreda levels and less frequently at higher levels. Household income and nutrition information are needed first at the region and national levels and then published at lower levels as assistance is given. Information about animal and crop disease outbreaks is needed at all levels immediately.

No one dissemination mechanism is best. The most appropriate depends on the type of data and target audience. A cooperative network of all sources of dissemination is the most desirable.

4 4 2 What is the most practical means of involving interested non-governmental organizations in the process?

NGOs have needs for agricultural information and are obtaining some through other sources or gathering what they require. They must become convinced that cooperating with others will benefit them through reduced time, costs or effort. A combined effort could improve the information and broaden understanding of the underlying problems and suggest possible solutions.

NGOs should be willing to become actively involved if they see benefit to their organization. When they do become actively involved then they need to be provided the tools and supplies to do the work.

4 4 3 What alternative information collection mechanisms might be utilized to meet performance reporting requirements on a regional basis?

Most data of interest comes from the farm and household levels, therefore, the data gathering procedures must focus at this level. Enumeration or observation will continue to be the main method of collecting data, as many of the rural people are illiterate. One of the main problems encountered is the different units of volume and weight used for reporting in PAs throughout the

country CSA has developed a book of codes for local weight and volume measures, and updates the book frequently. Use of the code book requires someone to look up the unit in the book and convert the local unit to a standard unit. If some simple volume and weight measuring devices could be used in the PA to identify these different units as encountered, then the conversion could take place on the field forms.

There are some simple devices like tape measures, hand held counters and other measuring devices that, if provided to data enumerators, could increase precision of measurements and counts. These are inexpensive and could be signed for by the enumerator, who return them after the work is complete.

Some hand held data entry devices are currently being used in developed countries for complex surveys. The enumerator is guided through the survey with questions being prompted based on previous answers. At the completion of the day's survey work the data can be transmitted to the computer by telephone or other electronic device. These are probably too sophisticated and expensive for most current applications, but as prices drop and Ethiopian surveys become more complex, these might be a consideration.

Remote sensing, satellite imagery and use of GPS are all technologies that have potential for improved survey data collection. Satellite imagery is presently being used for early warning. There are ways that this technology could be used to enhance sampling frame development. Some of the computer programs could be used to make information more understandable to the reader. GPS devices are becoming more affordable. Preliminary tests by CSA and others indicate that it is not precise enough for defining field dimensions and areas. However, it could be very helpful in defining larger areas like PA, woreda, etc. A real advantage is that it can be used to pinpoint locations precisely on satellite and other electronic mapping media.

Livestock estimation is a problem because of the mobility of the animals and nomadic terrain. Security and transportation to sampling locations is always a problem. If a sampling plan were developed using watering points as sampling units, then assistance from the military might be obtained. In other countries the military has been willing to take enumerators to difficult areas in helicopters to gather needed data. The military view this as a training exercise for their pilots while it also helps another government agency perform its work better. If a sample of watering points was chosen to survey on a sequence of days, and a helicopter carried the enumerator to each, a recording device like a camera or video could be used. For example, if the enumerator took video pictures of the animals around the watering points, the enumerator could cover 10 to 20 watering points per day. The video pictures could be printed or frozen on a TV screen and livestock counted. The field survey work might take three days and the counting five days. Alternative ingenious sampling procedures should be explored for nomadic areas.

5 Major Conclusions and Proposed Solutions

5.1 The Needs of Agricultural Statistics Users are not Being Met

The main problem with the agricultural statistics being produced and disseminated is that they do not meet all of the following conditions

- Disaggregated at least to the woreda administrative level,
- Inclusion of production figures for permanent and minor crops as well as the major crops,
- Production figures and estimates country-wide which would include urban and nomadic areas,
- Timely,
- Accurate,
- Believable when related to weather conditions and use of improved techniques, and
- Defensible

Solution There is a need for a meeting of the minds between all providers and users. Users need to increase their awareness as to what can be provided given the current allocation of resources. Providers need to evaluate what users require and propose creative options for meeting those requirements. Given the high demands and expectations for timely and accurate statistics, a joint initiative will have to be carried out by CSA and MoA (RAB) working with users.

5.2 CSA and MoA (RAB) Could Meet User Needs by Pooling their Resources

CSA, MoA and RAB are not coordinating and collaborating their statistical gathering resources to produce agricultural statistics that meet user needs. Because of this deficiency, scarce resources are being wasted and users are in a state of confusion when more than one figure is produced for the same thing.

Solution Set up the legal framework that would mandate the necessary working relationship between CSA, MoA and RABs. Develop an organization structure that can facilitate good communication and the two-way flow of information. Establish a working committee that fosters the exchange of information and technology. Through training and support improve quality and timeliness of statistics, moving from subjective to more objective estimates at lower administrative levels within a statistically defensible framework.

5 3 Improving Agricultural Statistics Requires Actions on Many Fronts

ASIA Phase I tried improving the quality, timeliness and reliability of agricultural statistics by focusing on the official providers of statistics for national accounts (CSA), even though other appropriate institutions should also have been assisted. Most users prefer statistics provided by RABs because they cover a lower administrative unit as well as broader crop and livestock coverage. When statistics from neither of the two main providers are adequate, users will often initiate their own rapid rural assessments. Therefore to improve the situation actions need to be initiated on a number of fronts.

Solution To improve statistics in Ethiopia the following types of assistance should be provided

- Technical assistance on request to CSA, MoA, RAB, DPPC or other appropriate organizations,
- Upgrading of AAU/SD so statistical capacity is developed in-country,
- Survey and system design, training and resources for the RAB, emphasizing a bottom-up approach. Developing agricultural information collection and dissemination systems by working with a selected region. The expectation is that successful results might be replicated to other sectors within the region and eventual to other regions, and
- Establishment of high level coordinating committees at both the federal and regional level that focuses on meeting user requirements

5 4 Realistic and Achievable Goals Need to be Set

Under ASIA CSA was not in full agreement with the goals and objectives agreed upon by USAID and MEDaC, therefore CSA did not commit wholeheartedly to fulfilling the terms and conditions of the agreement.

Solution Under any new initiative there needs to be wholehearted agreement and support from the participating parties as to what should be achieved, how it should be achieved, when it should be achieved, and who should be responsible for accomplishing the agreed upon tasks, in accordance with an approved work plan.

5 5 Achievement of Goals Should be Rewarded by Increased Support

At the initial phase I evaluation meeting between CSA, USAID and ASIA/ET the General Manager of CSA described the assistance provided by USAID as “peanuts.” The GM later clarified this statement by stating that it was in relation to CSA’s entire budget. This statement was made after CSA had received 18 vehicles with spares, numerous computers with software, in-country training, off-shore study tours, M.Sc. training for 6 CSA staff, and technical assistance. This assistance had been provided in good faith with the expectation that CSA would fulfill the terms of the agreement, which was not the case. Repeating the same experience with CSA or any other organization should be avoided.

Solution Project commodities should be provided after a participating agency has achieved predetermined goals. Project commodities should also be equally spread out over the life of the project. In addition, if outstanding levels of performance are reached, then additional support should be provided in a timely manner.

5.6 Options

1 Discontinue support at end of Phase 1 (December, 1999), with funds committed to complete the masters training of 2 CSA staff

Pros This supports the position that no further assistance should be extended because of the lack of notable achievements during the first phase. Approximately \$ 700,000 could be de-obligated, thus limiting the total expenditures under ASIA.

Cons USAID would not be in a good position to assist in a timely manner with future agricultural statistic improvement activities when there is a change in attitudes and responsiveness.

2 No cost extension of Phase 1 through September 2000 (DCM PACD) ASIA PASA authorized to assist AAU/SD, DA training and DPPC assistance. Emphasis during extension being placed on NAC certification

Pros A presence could be maintained for providing assistance when requested at a reasonable cost. CSA would have another chance to complete key activities if they so desire. During this extended period, a follow-on performance based initiative could be designed that opens up ASIA to all interested parties that provide and utilize agricultural statistics and information.

Cons This would further delay medium term initiatives that require substantial funding (e.g. upgrading of AAU/SD faculty through providing US based PhD training and a comprehensive regional based agricultural statistics development program). There could be some uncertainty within GFDRE as to the objectives and motivation of USAID. MEDaC with CSA urging, might try to limit the degree of support to other institutions outside of CSA.

3 Developing and Funding a new Collaborative Agricultural Information System (CAIS) initiative under a greatly expanded mandate which potentially covers all providers and users of agricultural statistics and information at both the federal and regional level
Program oversight and coordination would be done by USAID with technical assistance provided through USDA PASA, IQC providers, direct contracts and a local FSN
USAID to determine the source of assistance based on the unique requirements of the task

Pros GFDRE would receive a clear message from USAID that timely and accurate agricultural statistics are of a high priority. This is the type of development activity that requires a high degree of cooperation and collaboration among and between federal and regional government, as well as, donors and NGOs. Broadening the number of institutions receiving support would set up a situation whereby supplemental assistance could be provided to those institutions that meet or exceed their goals. Expanding the project to include a regional element opens up the possibility of replication to other sectors and regions, if successful.

Cons Continuing with a phase II ASIA initiative might give the message that the performance levels achieved were within acceptable limits. Having a new initiative would eliminate this message. An expanded outreach under a new initiative that could be called "Collaborative Agricultural Information System" (CAIS) will be more costly than what was expended under Phase I since the number of institutions that could benefit is greatly expanded.

APPENDICES

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LIST OF PERSONS INTERVIEWED

Appendix 2 - List of Persons Interviewed

Name	Organization	Position
Dejene Abasha	MoA	Head, Extension
Worknem Abebe	ANRS/Office of the Governor	Administration and Social Sector Head
Abebaw Alemayehu	WB	Operations Officer, Social Sector
Abebaw Assefa	West Gojjam (ANRS) BoA	Crop production expert/ Extension team
Temesgen Banketa	CSA/DPD	Programmer (M Sc – MU)
Zekele Bezie	ANRS/BoA	DA Mashenby PA
Silabat Bishaw	ANRS/BoA	DA Mashenby PA
Mihret Bizuneh	European Union	Grain Market Information Expert/Food Security & Food Aid Programme
Paul W Blackwood	USDA/NASS/IPO	Deputy Director
David Eckerson	USAID	Deputy Director
Teshome Erkinch	DPPC/EWD	Head
Sissay Gebregiorgis	FAO	Programme Assistant
Belay Gebremedhin	MoA	Head, Planning
Woldemeskel Gebremariam	MoA/NAIS	Head
Dr Tadele Gebreselassie	USAID/ONAR	Project Manager, Program Specialist
Fitsum Gebreweld	USAID	Project Management Specialist
Fekadu Habte	ANRS/BoPED	Head, Macro Planning
Tibebu Haile	NFIA	Head, Marketing Development Department
Wuletaw Hailemariam	ANRS/DPPC	Commissioner
Dr Abdulahi Hassen	CSA	General Manager
Stephen Kellogg	CSA/USDA	Resident Advisor
Mesfin Kinfu	FAO	National Programme Officer
Abebe Kirkos	CSA/ASD	Expert Team Leader, Land Utilization and Crop Statistics
Dr Tadewos Koroto	AAU/SD	Department Head

Name	Organization	Position
Amare Legesse	CSA/ASD	Statistician (M Sc – MU)
Judith Lewis	WFP	Representative and Country Director
Makonnen Manyazewal	MEDaC	Vice Minister
John McHarris	WFP	Vulnerability Assessment Officer
Germa Mogas	Zwira woreda ANRS BoA	Head, Agricultural Office
Jemal Mohammed	MEDaC	Head, Macro Planning and Economic Policy Analysis Department
Hansjorg Neun	European Union	Local Food Security Unit
Anthony Victor Obeng	FAO	Acting Resident Representative
Taffese Olkeba	Famine Early Warning System	Assistant FEWS Field Representative
Dennis Panther	USAID/OANR	Agricultural, Natural Resources and Environment Officer
Tsehay Redda	MoA	Acting Head, Animal & Fisheries Resources Development and Regulatory Department
Kurt A Rockeman	USAID/OANR	Chief
Vicke Safstrom	CSA/Statistics Sweden	Household Survey Advisor
Ali Said	European Union	Grain Market Information Expert/Food Security & Food Aid Programme
Larry A Sivers	USDA/NASS/IPO	Director
Girma Taddesse	CSA/ASD	Head
Getachew Teklemedhin	Animal Products and By-Products Marketing Development Authority	Manager
Abewa Tilahun	MEDaC	Expert, Private Sector Team
Mekbib Tilahun	MEDaC	Head, America Desk
Fekade Tsegaye	CRDA	Deputy Executive Director Programmes, Training, Advisory & Communications
Jon Unruh	FEWS	Country Representative
Feleke Wakjira	EGTE	Head, Planning

Name	Organization	Position
Junko Williams	USDA/FAS/ICD	Development Resource Specialist
Mebratu Yalew	DPPC/EWD	Surveillance Team Leader, Marker and Pastoral Areas
Addis Yigzan	CSA/ASD	Statistician (M Sc - MU)
Demile Yismaw	MEDaC	Team Leader for Crop Development
Samia Zakaria	CSA	Deputy General Manager
Getachew Zeleke	ANRS/BoA	Head, Planning

Appendix 3

**FINAL EVALUATION MEETING BETWEEN CSA, USAID AND
EVALUATORS – 1/10/99**

Appendix 3 Final Evaluation Meeting between CSA, USAID and Evaluators - 1/10/99

Information Requested

Statement of Work

The evaluation will produce a report which describes the present structure and function of the system for collecting and disseminating agricultural information and statistics in Ethiopia, summarized the impact of USAID assistance to CSA to improve the system under Agricultural Statistics Improvement Activity (ASIA), presents the options available for improving the overall system, and recommends a plan of action for future support

In order to provide a comprehensive picture of the current agricultural information system in Ethiopia, the following information is requested from CSA

- 1 What are the specific roles, responsibilities and linkages that CSA has with other institutions that are involved in the collection and dissemination of agriculture information and statistics?
- 2 Which institutions are the principal users of agriculture information and statistics and how do they use this information?
- 3 What are the strengths of the current system?
- 4 What are the weaknesses of the current system?
- 5 What has been the impact on the collection and dissemination of agricultural information and statistics of USAID assistance to CSA under the ASIA project? Specifically
 - a how have the quality of agricultural information and statistics collected and reported been enhanced by ASIA?
 - b is information being collected and disseminated in a timely manner?
 - c how has the system improved as a result of ASIA efforts? Specifically
 - i what has been the effect of short-term training on CSA capacity and performance?
 - ii what has been the effect of long-term training on CSA capacity and performance?
 - iii what has been the effect of technical assistance on CSA capacity and performance?
 - d what specific problems remain to be addressed?

- 6 Within the next 10 years the objective is to have established and functioning efficiently and integrated system which collects and disseminates agricultural information and statistics in a timely manner for effective use by governments, private and public organization, and farmers. In that regard, what actions are recommended in the short and medium term to improve the timely collection, dissemination and effective use agricultural information and statistics in Ethiopia consistent with the long-term objective? Specifically
- a what steps/actions should the GFDRE take in the short run (1 year) to improve and strengthen the effectiveness and performance of the present system?
 - b what steps/actions should the GFDRE take in the medium term (5 years) to improve and strengthen the effectiveness and performance of the present system?
 - c what steps/actions should the GFDRE take in the long term (10 years) to improve and strengthen the effectiveness and performance of the present system?
 - d which of the steps/actions identified above are highest priority? why?

ACRONYMS

Acronyms

AAU	Addis Ababa University
AAU/SD	Addis Ababa University Statistics Department
AgSS	Agricultural Sample Survey
ANRS	Amhara National Regional State
ASD	Agricultural Statistics Department (CSA)
ASIA	Agriculture Statistics Improvement Activity (DCM)
ASIA/ET	ASIA/Evaluation Team
ASIP	Agriculture Statistics Improvement Project
BoA	Bureau of Agriculture (also referred to as RAB)
BoPED	Bureau of Planning and Economic Development
CARE	Cooperative American Relief Everywhere
CEFIS	CARE Ethiopia's Food Information Systems
CIDA	Canadian International Development Agency
COTR	Contracting Officer's Technical Representative
CRDA	Christian Relief and Development Association (umbrella NGO - 162 partners)
CRS	Catholic Relief Service
CSA	Central Statistical Authority (MEDaC)
DA	Development Agent
DCM	Development of Competitive Markets (USAID)
DPD	Data Processing Department (CSA)
DPPB	Disaster Preparedness and Prevention Bureau (region)
DPPC	Disaster Preparedness and Prevention Commission
DPPD	Disaster Preparedness and Prevention Department (zone)
EA	Enumeration Areas
EGS	Employment Generating Schemes
EU	European Union
EGTE	Ethiopian Grain Trade Enterprise
EMA	Ethiopian Mapping Authority
ERDA	Ethiopian Resources for Developing Agriculture Project
EWC	Early Warning Committee
EWD	Early Warning Department (DPPC)
EWS	Early Warning System
EWWG	Early Warning Working Group
FA	Farmers' Association
FAO	Food and Agriculture Organization of the United Nations
FAS	Foreign Agricultural Service (USDA)
FEWS	Famine Early Warning System (USAID)
FIVIMS	Food Insecurity and Vulnerability Information and Mapping System
FSU	Food Security Unit (EU)
GIS	Geographic Information System
GIEWS	Global Information and Early Warning System (FAO)
GPS	Global Positioning System
GSD	General Statistics Department
GFDRE	Government of the Federal Democratic Republic of Ethiopia

IAR	Institute of Agricultural Research
IGADD	Inter-Governmental Authority on Drought and Development
ILRI	International Livestock Research Institute
IPO	International Programs Office (USDA/NASS)
LWF	Lutheran World Fund
MEDaC	Ministry of Economic Development and Cooperation
MoA	Ministry of Agriculture
MoE	Ministry of Education
MoH	Ministry of Health
MU	Makerere University (Uganda)
NAC	National Agricultural Census (also referred to as NASE)
NASE	National Agricultural Sample Enumeration (also referred to as NAC)
NAIS	National Agricultural Information System
NASS	National Agricultural Statistics Service (USDA)
NDVI	Normalized Difference Vegetation Index
NEWC	National Early Warning Committee
NFIA	National Fertilizer Industry Agency
NGO	Non Governmental Organization
NMSA	National Meteorological Services Agency
NRASD	Natural Resources and Agricultural Statistics Department
NSIA	National Seed Industry Agency
OANR	Office of Agriculture and Natural Resources
PASA	Participating Agency Service Agreement
PMO	Prime Minister's Office
RAB	Regional Agricultural Bureau (also referred to as BoA)
RFE	Rainfall estimate from cold cloud duration data
RRB	Relief and Rehabilitation Bureau (regional level - original DPPC designation)
RRD	Relief and Rehabilitation Department (zonal level - original DPPC designation)
RDPPC	Regional Disaster Prevention and Preparedness Committee
SBO	Statistical Branch Office (CSA)
SCF	Save the Children Fund (UK and US)
TDY	Temporary Duty Assignment
UNDP	United Nations Development Programme
UNEUE	United Nations Emergency Unit for Ethiopia
UNICEF	United Nations International Children's Emergency Fund
UoB	University of Botswana
UOFS	University of Orange Free State
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VAM	Vulnerability Assessment and Mapping
WB	The World Bank
WVI	World Vision International
WFP	World Food Programme